

Memorandum for: All Interested Parties

From: [Julie Prusky](#), N/NGS4

Subject: Revisions to the FGCS Bluebook Volume 1 and its Annexes (4/1/15)

Volume 1 renamed Global Navigation Satellite System Control

Preface and Content, *Chapter 1* and *Annex L* were superseded and posted in their entirety in the superseded section. The documents were replaced with a new document titled *Introduction*

A new document entitled *GNSS Bluebook File Submission* was created to replace the Submission Checklist in Annex L

Chapter 4 replaced *Chapter 2*. *Chapter 2* was superseded and posted in its entirety in the superseded section

The following obsolete records were not kept in Chapter 4 and all references to them were removed

- *13* Geodetic Datum and Ellipsoid Record
- *20-22* Horizontal Direction Set Records (per Addendum V)
- *28* GPS Clock Synchronization Record
- *29* GPS Clock Synchronization Comment Record
- *30-32* Horizontal Angle Set Records (per Addendum V)
- *40-42* Vertical Angle Set Records (per Addendum V)
- *45-47* Observed Difference of Elevation Records (per Addendum V)
- *50-55* Distance Records (per Addendum V)
- *60-61* Azimuth Records (per Addendum V)
- *71* GPS Antenna Record (replaced with *72* record)
- *81* Control Point Record (UTM/SPC)
- *82* Reference or Azimuth Mark Record (per Addendum V)
- *83-84* Bench Mark, Geoid Height Records (replaced with *86* record)
- *85* Deflection Record (per Addendum V)

The following data were removed from the following records

- *25* - GPS Occupation Header Record
 - Length of Cable
- *27* - GPS Occupation Measurement
 - Height of L1 Phase Center
 - Dry Bulb Temp and Code
 - Wet Bulb Temp and Code
 - Relative Humidity
 - Barometric Pressure and codes
 - Weather Code
- *80* - Control Point Record
 - Order-Type and all references to it

The following data were added to the following records

- *27* - GPS Occupation Measurement Record
 - Allow for negative antenna height
- *80* - Control Point Record
 - Allow special characters (see Annex D)

Text throughout was updated for clarity and consistency

Annex D

Changed allowable characters from 40 to 25 & 30 for vertical and GNSS bluebooks respectively throughout the text

Removed restrictions on special characters (see specifics in Annex D)

Changed the examples of a disk with no stamping from:

Monument	Stamped	Designation
USGS Chis Square		WO 23 RM=148 RM

To:

Monument	Stamped	Designation
USGS Chis Square	<i>no stamping</i>	WO 23 RM=148 RM

Changed imbedded to embedded. This is the preferred usage according to what I could find

Removed page numbers from format example list and added bookmarks instead

Added a list of figures under the list of formats

Annex E

Removed - Obsolete

Appears in the superseded section in its entirety

Annex F

Added reference to addendum V stating no more classical surveys policy

Updated the list of Gravity instruments

Removed precise numbers of gravity instruments as there were not enough in the series

Removed “unknown” survey equipment for all classes of equipment

Removed Doppler Satellite Tracking System

Removed GPS instruments and replaced with link to IGS

Removed horizontal classical instruments

Removed reference to Uncalibrated Steel Tapes and other obsolete leveling equipment

Removed “Total Station” section

Annex G

This annex is obsolete as NGS no longer uses order-types

Appears in the superseded section in its entirety

Annex K

Remove reference to horizontal report and Chapter 1

Changed floppy disk to DVD

Removed the section titled Report Outline for a Horizontal Control Project

Added hyperlinks where appropriate

Change title of Annex K from Project Report Instructions

To

Leveling Report Instructions

Annex L

This annex was replaced by the *Introduction* page

Appears in the superseded section in its entirety

Annex M

Removed list of antennas

Linked to the NGS ANTCAL web page

Updated text to reflect current changes and explain why using a calibrated antenna is important for precise observations.

Annex N

Updated information about the Data Media Identifier for clarification.

Changed end date of ITRF92 from 1/9/94 to 1/2/94 per <http://acc.igs.org/igs-frames.html>

Added two paragraphs dealing with Antenna Phase Patterns that were in Chapter 2 (now chapter 4) under the “I” record.